



## Early Journal Content on JSTOR, Free to Anyone in the World

This article is one of nearly 500,000 scholarly works digitized and made freely available to everyone in the world by JSTOR.

Known as the Early Journal Content, this set of works include research articles, news, letters, and other writings published in more than 200 of the oldest leading academic journals. The works date from the mid-seventeenth to the early twentieth centuries.

We encourage people to read and share the Early Journal Content openly and to tell others that this resource exists. People may post this content online or redistribute in any way for non-commercial purposes.

Read more about Early Journal Content at <http://about.jstor.org/participate-jstor/individuals/early-journal-content>.

JSTOR is a digital library of academic journals, books, and primary source objects. JSTOR helps people discover, use, and build upon a wide range of content through a powerful research and teaching platform, and preserves this content for future generations. JSTOR is part of ITHAKA, a not-for-profit organization that also includes Ithaka S+R and Portico. For more information about JSTOR, please contact [support@jstor.org](mailto:support@jstor.org).

of observation, in five others (including  $\beta$  648, of which there is no other orbit) they are fairly satisfactory, but in the remaining six ( $\beta$  524,  $\beta$  883,  $\text{O}\Sigma$  235,  $\xi$  *Scorpii*,  $\beta$  416, and 85 *Pegasi*) the residuals in angle average over  $23^\circ$ , and one of the distance residuals, in  $\beta$  416, exceeds  $0''.4$ .

November, 1908.

R. G. AITKEN.

#### NOTE ON THE BINARY STAR $\xi$ SCORPII.

Two orbits for this well-known binary system have recently been published, one by DOBERCK<sup>1</sup> and one by LOHSE.<sup>2</sup> Both are based on practically the same data as my orbit published in 1905,<sup>3</sup> and both computers have adopted the assumption made by me, that the periodic time is about 44.5 years instead of over one hundred years.

The three sets of elements do not differ greatly, but the motion in the apparent orbit has been so rapid during the past three years that even slight variations in the elements lead to decided changes in the residuals derived by comparing the computed and observed positions.

The following tabulation gives my measures made after my orbit was published, and the residuals derived by comparing them with the three sets of elements:—

Date.	$\theta_0$	$\rho_0$	Nights.	(O-C) A.	(O-C) D.	(O-C) L.
1905.50	$13^\circ.8$	$0''.18$	3	$-5^\circ.6 + 0''.02$	$-19^\circ.1 + 0''.03$	$-14^\circ.8 + 0''.02$
1906.38	$68.7$	$0.23$	4	$-13.3 + 0.02$	$-25.6 + 0.03$	$-29.6 \pm 0.00$
1907.40	$108.2$	$0.32$	4	$-9.4 + 0.01$	$-17.4 + 0.01$	$-21.3 - 0.05$
1908.48	$125.8$	$0.36$	2	$-10.4 - 0.06$	$-15.6 - 0.07$	$-18.8 - 0.14$

These residuals put the correctness of the short period of revolution beyond question, and indicate that the other elements of the orbit are fairly well determined. Further computation will not be profitable until the companion star has passed nearly through the second quadrant.

November, 1908.

R. G. AITKEN.

<sup>1</sup> *Astronomische Nachrichten*, **174**, 257, 1907.

<sup>2</sup> *Pub. d. Astrophysik. Observ. zu Potsdam*, **20**, Pt. I, 124, 1908.

<sup>3</sup> *Lick Observatory Bulletin*, No. 107. 1905.